Practical Strategies for Developing Creativity in the Classroom

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**DIVERGENT THINKING**

Fluency = lots of ideas

Flexibility = different

Originality = unique idea that solves the problem.

Elaboration = details

**QUESTIONING FOR DIVERGENT THINKING**:

* Ask open-ended questions. These questions have no one right answer but call for lots of responses. Phrases such as what would happen if the world turned in reverse. What would you do if all flowers started talking? In what ways can the ocean be tamed?
* Ask feeling questions. Encourage students to examine their emotions and values. Can you explain how you feel about homework? Is it right that some people have more money than others?
* Ask questions of a metaphorical nature. How is a coffee pot like anger? How would you feel if you were an ant? Which is softer a whisper or a cotton ball?Inventor’ Warm-up

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The saying “necessity is the mother of invention has been around a long time. It means that people invent things when they have a problem or a need. Look at each of the items on the list below. Each item can solve a problem or fill a need. Invent as many things on the list as you can. You may use scissors, newspaper, and tape to make your inventions. Absolutely no other material may be used. Be prepared to describe your invention and tell how it would be used.

***Ready? Get set! Invent…***

1. Something that could save your life.
2. A wasp trap.
3. A way to measure the height of a two-story building.
4. A foolproof clue to your identity.
5. A container that would hold a 7 pound rock.
6. A hearing aid.
7. A teaching aid to help young children understand simple subtraction problems.
8. An object or way to help people communicate.
9. Something a pet owner might need.
10. Something to use in preparing or cooking food

**BRAINSTORMING**

* **Criticism is ruled out. Accept everything. Withhold criticism or evaluation of the ideas. In other words defer judgment.**
* **Freewheeling is welcomed – the wilder the idea the better. New ideas often come out of silly comments made in an accepting environment.**
* **Quantity wanted. The more ideas generated the higher the probability for original ideas.**
* **Combination and improvements are sought. Piggybacking on each other’s ideas is desirable.**
* **Participate with your students. Give a suggestion. Use cues from SCAMPER.**

SCAMPER

SCAMPER is a problem solving technique that helps work through stressors in your life. By identifying situations in which you feel stressed you can use SCAMPER to generate possible solutions to the problems. Each letter represents a strategy for changing a situation that would help alleviate the stress.

For instance if you are overscheduled or have too much on your plate you can experiment with coming up with solutions based on the following:

**S**… Substitute (What similarities exist; what could be substituted for one of the activities that you have on your plate that will cause less stress?)

**C…** Combine (Might something be combined or brought together to lessen your responsibilities and find you more time?)

**A…** Adjust or adapt ( What changes or adjustment can be made to your daily schedule to provide you with more time?)

**M**… Magnify, Minify, Modify (What could happen if you could change the situation to match these conditions?)

**P**… Put to other uses ( In what other ways might parts be used? Could your paper in one class be expanded to meet the requirements of another?)

**E**… Eliminate, Elaborate (What could be removed or enhanced? Could you eliminate an extra-curricular activity especially one that causes undo stress or too much time?)

**R…** Reverse, rearrange (What effects would come from changing the sequence?)

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| --- | --- | --- | --- | --- | --- | --- |
| **S**  **S**ubstitute | **C**  **C**ombine | **A**  **A**djust  Adapt | **M**  **M**agnify  Minify  Modify | **P**  **P**ut to other uses | **E**  **E**liminate  Elaborate | **R**  **R**everse  Rearrange |
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**Attribute listing** requires you to list the various attributes of anything in order to examine the parts. Knowing the nature of things allows you have many opportunities to change elements in order to create new and different ideas.

1. List the attributes of your best friend
2. List the attributes of a desert.
3. List the attributes of New York City.
4. List the attributes of peanut butter
5. How are the desert and peanut butter alike? How can you substitute attributes of each to create something unique?

**Social Studies Issue: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Attributes** | **Possible Changes or Modifications** |
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**Morphological Matrix** is a way to look at the attributes of a variety of aspects and combine them creatively to solve a problem or create an original item.

**Inventing a novel item.**

|  |  |  |
| --- | --- | --- |
| People | Places | Items |
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Each team is to select one item from each column from different rows and build the item in column three so that we will know the person it is for and where in the wall it is. For instance if Bill Clinton were in column One, and Mount Everest in Column two and a space capsule in three your space capsule would need to reflect attributes that would inform the viewer that it was for Bill Clinton to use on Mount Everest. This is tapping students’ knowledge about each element and how they can creatively combine them to create something new.

The Wonderful World of Words

**Scene One:**

Narrator: come with me to the wonderful world of words which is in the land of your imagination. Words are beautiful—

One: Vermillion

Two: Mellow

Three: Periwinkle

Four: Shallow

Five: Wonder

Six: Cellar door

**Scene Two:**

Narrator: Words are magic—

Two: Abracadabra

Four: Rumplestilskin

Six: Fee –fi-fo-fum

Three: Double, double, toil and trouble, fire burn and caldron bubble.

**Scene Three**:

Narrator: Words are fun—

Five: Sachet,

One: Moisty

Six: Jingle

Four: Pebble

Two: Serendipity

Three: Pumpernickel,

Five: Swashbuckling.

**Scene Four:**

Narrator: Words make up the wonderful world of your imagination which is peopled with all kinds of characters—

Four: Kittens

One: Frogs

Three: Geese

Six: Lions

Five: And even hippopotamuseseseses.

**Scene Five:**

Narrator: And your imagination takes you everywhere—

Three: Petunia’s farm

Four: Brier patches,

One: Lake Okeefenokee,

Six: Circuses,

Two: And faraway jungles.

Narrator: The world of the imagination, The world of words, where does the power lie?

One: In your mind’s eye.

**Creative Thinking in Math and Science**

**Problem finding and Play:**

**Requires:**

* RECOGNIZING PATTERNS

#### MAKING CONNECTIONS

* TAKING RISKS
* CHALLENGING ASSUMPTIONS
* TAKING ADVANTAGE OF CHANCE
* SEEING IN NEW WAYS

##### BARRON& EISNER

###### DISCOVERY LEARNING

* **MESSING ABOUT**
* **ASKING QUESTIONS**
* **FORMING HYPOTHESES**
* **TESTING HYPOTHESES**
* **DRAWING CONCLUSIONS**

**SCIENCE:**

**7-up and raisins: Guided discovery vs. discovery**

**MATHEMATICS:**

**Creating math problems -- seeing the world as a math problem**

**Synectics**

**To enhance critical and creative thinking:**

###### Listing attributes

###### Making comparisons

**To enhance creativity:**

* Seeing things in new ways
* Generating alternatives

**Enhance Writing –** using metaphors

**Enhancing Problem Solving –** using metaphorical thinking

**“Making the strange familiar and the familiar strange.”**

**Three kinds of analogies:**

1. **Direct analogy: simple analogy** “How is laughter like peanut butter – they both can get stuck in your throat. Which is louder a roar of the crowd or dead silence. Or a simile or metaphor, I sat as quiet as a mouse waiting for the perfect moment to make my escape.
2. **Personal analogy:** being the thing -- Fear crept through me spreading its powerful poison throughout my bones**.**
3. **Symbolic analogy:** compressed conflict – two word statement containing a conflict – revoltingly delicious, delicate armor

You have been selected to participate in a multimedia celebration of creativity. Your group will create a metaphorical representation of the meaning of creativity. You will need to use all three kinds of metaphors described above.

